

MUNICIPAL ELECTIONS AND CULTURAL EXPENDITURE

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ABSTRACT

The aim of this paper is to analyse, for the first time, the effect of electoral timing on municipal public cultural spending. While the existence of an electoral cycle in cultural spending has been investigated at the national and state level, there is no empirical evidence at the local level. We use a panel sample of all municipalities from the Spanish Region of Murcia for 1995-2008. Our results reveal that mayors adopt an opportunistic behaviour, increasing cultural spending on the election year. We also show that the mayor's political strength and re-election willingness impact electoral cycle. Additionally, we try to shed some light on the determinants of public cultural spending.

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1. Introduction

Theories about Political Budget Cycles (PBC) are a recent development of the literature on Political Economic Cycles (PEC). Periodic elections in democratic countries are the cause of these PEC, since incumbents may be tempted to manipulate economic variables to remain in power. Specifically, PBC models investigate how incumbents use budgetary and fiscal policy instruments to increase their chances to win the elections.

The variable usually used to check the existence of PBC is public spending. However, we think it is interesting to analyze PBC on specific types of public spending. This interest stems from new PBC theories showing incumbents sometimes don't change the total budget but they just modify its composition (Rogoff, 1990; Drazen and Eslava, 2010). Through this approach, some works have identified PBC on health, social security and education spending.

Regarding cultural spending, two works have studied PBC. Getzner (2002) does not find an increase in total cultural spending before elections, while Noonan (2007) finds PBC on state-level arts expenditure. None of them focus on local governments. However, from our point of view, local governments are suitable to study PBC on cultural spending for two reasons. On the one hand, local politicians are better informed about voters' preferences on culture than national politicians. Besides, the former are directly rewarded if they meet voters' preferences and punished otherwise (Van der Ploeg, 2006). Consequently, incentives to influence voters through cultural expenditures manipulation are higher for local politicians than upper level politicians. On the other hand, large parts of local budgets are reserved for statutory expenditure, making cultural policy one of the few areas where local governments have wide authority to decide (Schulze and Rose, 1998). Accordingly, chances are that cultural spending PBC be more pronounced at this level of government. In fact, the largest part of culture spending in Spain is managed by local governments.

The paper has been structured as follows. Section 2 reviews theoretical and empirical literature on PBC and on determinants of public cultural expenditures. Section 3 provides a descriptive presentation of public cultural expenditures in Spain. Section 4 shows the

econometric model, sample and variables. Section 5 presents results and section 6 summarizes the conclusions.

2. Literature review

2.1. Political Budget Cycles

PEC literature studies the relationships between economic fluctuations and the electoral schedule. Two kinds of models have described this phenomenon (Alesina and Roubini, 1992): opportunistic and partisan. In the former, PEC appears when governments boost economy to enhance re-election chances. The latter posits that fluctuations stem from the alternation in office of parties with different economic approaches.

Both models have evolved in two phases, depending on the assumption made on voters' behaviour. First, voters' expectations stem from adaptation, which allows governments to make a short-term influence on macroeconomic variables through monetary policy with electoral purposes (Nordhaus, 1975; Lindbeck, 1976) or partisan objectives (Hibbs, 1977). The second phase started in late 80's. Here, voters' rational expectations are assumed, which means that voters, in equilibrium, cannot be systematically cheated. In this case, it is the information asymmetries between voters and incumbents which lead to political cycles. Cukierman and Meltzer (1986), Rogoff and Sibert (1988), Rogoff (1990) and Persson and Tabellini (1990) develop opportunistic rational models. Alesina (1987, 1988) sets a rational partisan model.

Rogoff and Sibert (1988) point out the role of fiscal policy, rather than monetary policy, to create cycles. They present the original PBC model, based on information asymmetries between incumbents and voters about incumbents' competence. They assume that each incumbent has a competence level known by him/herself, but unknown by citizens. The latter cannot directly observe the incumbent's competence, and thus they must infer it from fiscal policy outcomes. Competence is defined as the ability to provide certain level of services with the lowest taxes. This information asymmetry creates incentives for incumbents to implement expansive fiscal policies before elections to show competence to voters and enhance the chances to remain in office. Later, Rogoff (1990) presents a model in which electoral manipulation appears by means of a change in budget composition. The government, before elections, increases spending that is more noticeable by voters (public consumption) instead of less short-term perceptible spending (public investment). Anyway,

though empirical evidence is stronger for PBC in policies than in macro-economic outcomes, the literature to date is far from unanimous (Geys, 2007).

In relation to the determinants of PBC, incumbents' ideology, political strength (majority) and the decision of running for re-election can impact on ability or incentives of incumbents to manipulate fiscal instruments with an electoral aim. Section 2.2 tackles these issues.

2.2. Political factors

Ideology

It is commonly assumed that left-wing parties favour public spending increases while right-wing parties aim at budget reductions, both at national and subnational level (Tufte, 1978; Hibbs, 1987; Seitz, 2000; Allers *et al.*, 2001; Tellier, 2006). Cusack (1997) defines this idea as the “partisan politics matters” (PPM) thesis.

Hibbs (1977) posits that PPM stems from differences between left and right electorate. Left electorate has lower income levels, and accordingly supports social policies on wealth redistribution. Right electorate, with high income, applauds tax reductions. Accordingly, we expect left governments, with the aim of redistribution, fund culture with public resources. In fact, income inequality has been one of the arguments to justify government intervention in culture (Fullerton, 1991; Frey, 2003; Gray, 2009). Following this approach, cultural activities must be affordable to people of all kinds. Consequently, governments should finance culture to make its consumption available to people who are not able to pay much money for it (Frey, 2003). Therefore, considering the redistributive nature attributed to culture, left governments are expected to spend more on culture than right governments.

However, empirical literature so far has shown that high-income people both appreciate culture to a higher extent (Bill-Hansen, 1997; Throsby and Withers, 1986) and are more in favour of public funding of culture (Schulze and Ursprung, 2000; Getzner, 2004; Potrafke, 2010). Thus, considering that governments adapt spending to their constituents' preferences (Drazen and Eslava, 2010; Bräuniger, 2005), right incumbents will probably finance culture as a way to satisfy their high-income voters. It is not surprising that some empirical works find an anti-wealth redistribution effect, with high-income people benefiting from government-funded cultural activities (Grampp, 1989; Throsby, 1994; Frey, 2003). From this point of view, government funding of culture would favour high-income people,

compared to health, education or social assistance, which would benefit low-income people. This could make left governments replace culture spending with other policies of wealth redistribution (Potrafke, 2010).

According to the literature, the impact of ideology on culture spending is ambiguous (Getzner, 2002). Schuzle and Rose (1998) and Potrafke (2011) show that right governments support culture to a higher extent than left/green municipal and state governments in Germany, respectively. Stastna (2009) finds the opposite relationship in Czech local governments. No impact of ideology on culture was found in Austria (Getzner, 2002), Flemish local governments (Werck *et al.*, 2008) or German municipalities (Wert, 2006).

Ideology not only impacts culture spending, but it also affects PBC. Kneebone and Mckenzie (2001) show that Canadian provincial governors reduce revenues and increase spending in the electoral year, only when the governor belongs to a right party. Veiga and Veiga (2007) show all Portuguese mayors adopt an opportunistic behaviour, but left-wing mayors increase spending to a higher extent than right-wing mayors in the electoral year.

Political strength

According to Alt and Lowry (1994) there are two theoretical approaches on the relationship between political strength and fiscal policies. On the one hand, Roubini and Sachs (1989) show that coalition governments face higher deficits than majority, no-coalition governments. No-majority governments, these authors say, weakened by internal conflicts, are influenced by interest groups, which leads to spending increases. This literature coined this hypothesis as the “Roubini and Sachs weak government hypothesis” (RSH). On the other hand, Alesina and Rosenthal (1994) and Jones *et al.* (1997) suggest that divided governments’ political disagreement hinders budget modifications, which reduces the impact on fiscal policies.

According to these two opposite approaches, the literature finds an ambiguous effect of RSH on incumbents’ opportunistic behaviour. On the one hand, majority governments have fewer incentives to signal their ability to voters (Schneider, 2010). Governments with a weak majority have more chances not to be re-elected in the next election, and thus they are prone to manipulating the budget to keep in power. On the other hand, majority governments have the power to manipulate the budget on their own. In this way, Veiga and

Veiga (2007) suggest that mayors with majority have the ability to pass a budget with a higher deficit in the election year.

Gays (2007) extends the literature on political strength, arguing theoretically how it can influence on opportunistic behavior of incumbents and ultimately on the political budget cycle. On the one hand, electoral cycles may be less prominent under divided governments due to the coordination problems associated with them because it limits their ability to engage in electioneering. Government fragmentation not only can affect ability, but also incentives to behave opportunistically. In this sense, the incentives to create electoral cycle may be greater to a party that governs alone than a party that governs in a coalition, because is easier attribute to the former the pre-electoral expansion. On the other hand, electoral cycles may be more likely if government is more fragmented due to two reasons: the uncertainty about its political future, and thereby its incentives to manipulate policy are higher; the difficulty to internalize the fiscal costs of their actions is greater which may lead not only to a high level of spending, but also a high pre-electoral spending boom.

Stastna (2009), Getzner (2002) and Werck *et al.* (2008) find no effect of government fragmentation on cultural spending.

Lame duck vs. running for re-election

The traditional hypothesis posits that incumbents not running for re-election, either because they decide so or because of legal limits, have fewer incentives to manipulate budget with electoral aims. However, Rosenberg (1992) shows that lame duck politicians increase spending to a higher extent than those running for re-election. The former want to signal their ability, as a way to increase the chances to find a good job outside politics. Besley and Case (1995) compare the budget policies of US governors running for election with lame duck governors. The results indicate that the latter are less concerned about their reputation, thus reducing governors' effort to keep taxes and spending in a low level.

2.3. Socioeconomic factors

Income

According to Wagner's Law, the increase in the public sector size is a consequence of an increase in the income, provided that income elasticity of demand for public goods is greater than unity (Wagner, 1958). This elasticity, as we argued in section *Ideology*, is supposed to be higher than unity. Following Wagner's Law, Getzner (2002) posit that

income increases will lead to an increase in public spending in culture. Another approach is adopted by Schulze and Rose (1998) to assert that income has a positive effect on public investment in culture. According to the idea that parties determine their policies taking into account the preferences of the voters, they based their assumption on the fact that high-income people appreciate culture activities to a higher extent (Bill-Hansen, 1997; Throsby and Withers, 1986). This theoretical statement has been empirically confirmed by Getzner (2002), Wert (2006) and Lewis and Rushton (2007).

Although the majority of the empirical literature supports the theoretical assumptions, Schulze and Rose (1998) show a negative impact of income on culture spending, and Werck *et al.* (2008) don't find it significant.

Unemployment

Getzner (2004) states that citizens' support to culture spending will be lower as unemployment increases, due to the positive income elasticity on demand of cultural goods. Lewis and Rushton (2007) and Werck *et al.* (2008), however, don't find that relationship significant. An explanation for this could be that unemployed people's opportunity cost of time is lower, and accordingly, they are expected to demand more culture.

Education

Theoretical arguments suggest that educational level increases the enjoyment of culture and art. First, cultural consumption has been defined as positively addictive - the more cultural goods are consumed over time, the higher the marginal utility (Thorsby, 1994). People understand and enjoy a greater extent the more they consume culture, being more rewarding this process of accumulation of capital consumption for individuals with higher educational levels, since they obtain and decode information more easily (Schulze and Rose, 1998; Schulze and Ursprung, 2000).

Second, highly educated individuals can appreciate more the art because they have been exposed to an environment in which it is valued. For example, a university graduate has had to experience peer pressure to attend arts events (DiMaggio and Useem, 1978).

Finally, better-educated people also often have parents with high educational attainment. It is likely that better-educated children have been exposed to art in their childhood, and that early socialization influences the assessment of this in adulthood (DiMaggio and Useem, 1978).

Undoubtedly, the greatest value that individuals with a high level of education give to culture may explain why they are more favorable to public spending in this area. Schulze and Ursprung (2000), Getzner (2004) and Rushton (2005) show that education is one of the main factors affecting support for public funding of culture in different referendums on this issue. Brooks (2001) and DiMaggio and Pettit (1999) obtain similar results analyzing public preferences through surveys. Finally, contingent valuation studies have also confirmed that willingness to pay for culture is higher among people with higher education (Bill-Hansen, 1997; Throsby and Withers, 1986).

Although all these studies show that people with higher educational levels have a more favorable attitude toward culture and its public funding, most authors who have investigated the influence of education on cultural public expenditure have found no significant results (Lewis and Rushton, 2007; Noonan, 2007; Schulze and Rose, 1998; Stastna, 2009), except Werck *et al.* (2008), who show that educational level has a positive and significant impact on municipal cultural spending.

Furthermore, the effect of education on support for public provision of cultural services and spending on culture may depend on the level of government that makes such spending. Brooks (2001) shows education level is positively correlated with support for local financing of culture, but not when higher-level governments do it. The fact that local public funding has a particularly visible presence in the cultural events contributes to increased support from highly educated individuals, who mostly attend these events.

Age structure of population

The literature on cultural economics argues that a bequest value might be assigned to art which leads people to behave altruistically towards future generations. In other words, people might support public funding of culture in order to preserve cultural heritage for future generations (Frey, 2003; Bill Hansen, 1997; Schulze and Ursprung, 2000). Schulze and Ursprung (2000) argue that it is more likely that people with minor children exhibit this intergenerational altruism because they are more interested in taking into account future generations. Therefore, it can be expected an increase of support for public funding of culture in populations with a high proportion of young people. This relationship has been found by Getzner (2004), who studies the determinants of voting behavior in a referendum on the construction of a theater in Austria. According to the approach of Schulze and

Ursprung (2000), Getzner suggests that the approval rate is higher in populations with a high proportion of young people due to the perception of the value of cultural heritage. Nevertheless, the fact of being a parent not only increases the concern about the future of cultural heritage but also reduces the time available to attend cultural events (Rushton, 2005). Therefore, the opportunity cost of parental time might counteract the effect of bequest value, thereby reducing overall support for government intervention and spending on culture in populations with a high percentage of young people (Werck *et al.*, 2008). The influence of the share of young people on cultural spending has not been clearly determined in the literature. There are studies that show a positive relationship (Stastna, 2009), others that do not find significant results (Kushner *et al.*, 1993; Werck *et al.*, 2008) and others find that their impact on spending is negative (Noonan, 2007).

Regarding the effect of the share of elderly population on public cultural spending, some authors have shown a positive relationship. For example, Stastna (2009) indicates that the higher the percentage of elderly inhabitants, the greater the expenditure on culture, sport and leisure. Werck *et al.* (2008) reach the same conclusion for the case of municipal spending on culture. In both studies the authors attribute their results to the low opportunity cost of time of elderly people. This is why, according to Schulze and Ursprung (2000), they will be willing to support public financing of cultural activities.

Finally, the effect of the age structure of population on other expenditure categories might indirectly affects public spending on culture. Borge *et al.* (1995) show that a high percentage of young people reduces spending on cultural services because it increase spending on education. Likewise, a high proportion of older citizens generate more spending on care for the elderly which leads to a reduction on cultural spending. The authors state that due to budgetary constraints, an increase of one sector should be financed by a reduction in another sector.

2.4. Geographical factors

Population density

The effect of population density is ambiguous since may be related to public expenditure on culture in two ways. On the one hand, in municipalities with higher population density, the distance that people need to travel within them to attend cultural events is lower. Since this distance discourages attendance at cultural events (Schulze and

Ursprung, 2000; Getzner, 2004), is likely to decrease demand and spending in municipalities with lower population density (Withers, 1979). This relationship has been found by Stastna (2009), Borge (1995) and Aaberge (2003). On the other hand, higher population density may lead to economies of scale in the provision of cultural services. In this case, public cultural spending per capita will be lower in more densely populated areas. The existence of economies of scale could well explain the significant negative relationship obtained by Werck *et al.* (2008) between population density and municipal spending on culture in Flanders.

Population

It is generally assumed that larger local governments receive higher demands for public spending from their citizens (Ashworth *et al.*, 2005). Werck *et al.* (2008) extend this assertion to public spending on culture, and also provide another theoretical argument to explain the positive impact of population size on public expenditure in this area. The basic idea is that, since the largest cities in terms of population have a central role in relation to cultural public goods, it can be expected that cultural spending per capita in these cities is higher than in cities with lower population. In this regard, Schulze and Rose (1998) find that public orchestras funding increases with population size. Stastna (2009) shows that population size is positively related to spending on culture, sport and leisure and argues that this finding demonstrates that cultural life is concentrated in large cities. Similarly, Wert (2006), Borge (1995) and Werck *et al.* (2008) conclude that population impacts positive and significantly municipal spending on culture.

2.5. Financial factors

Krebs and Pommerhene (1995) consider, for the first time, that government support for culture might be influenced largely by the financial resources available. These authors show that public subsidies to the performing arts institutions depend on the financial situation of the public donor. In this sense, Werck *et al.* (2008) suggest that level of debt and government transfers received from higher levels are good indicators of the financial situation of the municipality.

Debt

Schulze and Rose (1998), Werck *et al.* (2008) and Potrafke (2011) use the level of debt to explain the behavior of public spending on culture. Schulze and Rose (1998) argue that

public funding of orchestras depends on the budget constraint that is measured by the level of debt, because it limits the ability of the city to raise new loans and restricts the resources to service debt. In other words, they assume that government support for local orchestras is negatively related to the level of debt. Werck *et al.* (2008) adopt a similar approach, arguing that it is likely that higher levels of historic debt lead to lower levels of public goods in the current period since the amortization of existing debts is paid from the current budget. Potrafke (2011) fails to demonstrate empirically the negative impact of debt on cultural spending.

Transfers

Another factor that may impact on public cultural spending are the transfers received from higher level governments. Werck *et al.* (2008) show that municipal spending on culture increases with increasing transfers. According to these authors, this effect was expected because local governments tend to provide more public goods when they can be financed, at least in part, through transfers, since the perceived cost of that spending is lower. Stastna (2009) also uses this variable considering it, in this case, as a measure of the current budget constraint. However, her results do not show a significant relationship between transfers and expenditure on culture, sport and leisure.

3. Public cultural expenditures in Spain

The 1978 Spanish Constitution sets three administrative levels: central government, autonomous regional government and municipalities. According to the areas of competence laid down in the Constitution, all three levels have general liability for culture.

On the one hand, local governments have duties on local heritage, cultural activities, amenities and ‘leisure activities’. The law requires municipalities of over 5,000 inhabitants must provide library services and it allows to local authorities to promote “complementary activities to those provided by other government bodies and, in particular, those concerning culture”. In reality, local authorities have a considerable scope to encourage cultural activities. In 2008 the GDP contribution of cultural activities accounted for 2.9%, EUR 7,111 million (0.66% of GDP) corresponding to public administrations: 15% central governments, 30% regional governments and 55% local governments¹. Therefore, in Spain

¹ Information retrieved from a Spanish Ministry of Culture database.

municipalities are the main public investors in culture. Even though local authorities are only responsible for providing library services in areas with more than 5,000 inhabitants, the fact that they yield most of the cultural expenditure can only be explained due to their proximity to citizens and the political compensation of such activities.

On the other hand, while local authorities are important for the development of cultural policies, no resources are transferred from the Central and Regional Administration (which manage most of the budget) to municipalities. Thus, decision over cultural spending lies in the hands of the local politicians due to the lack of both financial support from the government and legal obligations that may determine how much they should spend on culture. Thus, it could be considered mainly a discretionary category of expenditure. In fact, these differences in the cultural spending in the municipalities show the level of autonomy that local governments have over issuing cultural policies. That is why there are some municipalities where 10% of the annual budget goes to cultural policies, while others spend a much lower percentage (the average budget in 2008 was 5.06%) To sum up, this implies that Spanish municipalities have enough autonomy in cultural issues to create PBC.

4. Econometric procedure

4.1. Model and sample

Following the theoretical framework, we analyze the determinants of municipal cultural spendings by estimating an autoregressive panel data model. This model has been used by the PBC literature (Blais and Nadeau, 1992; Kneebone and Mckenzie, 2001; Veiga and Veiga, 2007; Drazen and Eslava, 2010) and also by the literature on determinants of cultural expenditure (Krebs and Pommerhene, 1995; Getzner, 2002; Noonan, 2007) to account for the persistence of spending decisions.

The lagged dependent variable as regressor (y_{it-1}) controls for the inertia in spending. The model specification is:

$$y_{it} = \alpha y_{it-1} + \sum \beta_j x_{jit} + c_i + \varepsilon_{it} \quad (1)$$

Where y_{it} is the dependent variable and y_{it-1} is the lagged value of the dependent variable. x_{jit} is the vector of explanatory variables, β is a vector of parameters to be estimated and c_i (unobservable heterogeneity) is designed to measure unobservable characteristics of the local governments that have a significant impact on local governments' cultural spendings.

They vary across municipalities but are assumed to be constant for each municipality. ε_{it} represents random disturbances.

The estimation method is Generalized Method of Moments (GMM), developed by Arellano and Bond (1991). This methodology uses all the right-hand side variables lagged twice or more as instruments and simultaneously it assumes that there is no second-order serial correlation in the errors in first differences. For this reason, in order to test the consistency of the estimations, we show the test for the absence of second-order serial correlation proposed by Arellano and Bond (1991). Likewise, we present the Hansen test for over-identifying restrictions, which tests for the absence of correlation between the instruments and the error term.

4.2. Sample

The sample consists of all municipalities from the Spanish Region of Murcia for 1995-2008. In this 14-year period, four municipal elections took place. Due to its features, the Region of Murcia is very representative of the Spanish municipalities. On the one hand, it is composed of a small number (45) of relatively large municipalities. On the other hand, we find an appropriate variability of municipal characteristics, since for example it has one of the largest municipalities in Spain in terms of km² (Lorca), together with a municipality with one of the highest population densities in Spain (Alcantarilla).

Working with subnational data has two main advantages: data features and PBC adequacy to this level of government.

Regarding data features, studies focused on national data usually take one country or a sample of countries. In the former case, the number of observations is small. In the latter, an international comparison is possible, with an increase of observations. However, the problem of institutional differences among countries arises. For example, with respect to public spending on culture Van der Ploeg (2006) argues that little reliable data exist for Europe on a comparable basis. Subnational samples solve both problems, because local and regional electoral data provide more observations than national elections (Rogoff, 1990). Besides, the institutional background is homogeneous, compared to samples of different countries.

In respect of PBC adequacy, some authors suggest that the subnational scope is the most suitable to test PBC theories. For example, Kneebone and McKenzie (2001) posit a stronger

PBC in subnational governments, because they cannot use monetary policy, but just fiscal manipulation to influence voters. Furthermore, Balerias and Costa (2004) think that under democratic rules, administration positions are subject to turnover rates higher than elsewhere in the economy. Incumbents who fail to be re-elected in general have no certain employment prospects in other public sector offices. These people must find an alternative job in case they are not re-elected. It therefore seems quite reasonable to expect rational incumbents to bear in mind outside income (that is, income earned outside the public sector). This behaviour is particularly plausible at the local rather than the central government since the uncertainty regarding future political appointments is greater for local than for higher-rank politicians.

4.3. Variables

The dependent variable of our model is municipal expenditure on culture per capita (*culturalex*).

We have included the dummy variable *electionyear* to test PBC. This variable takes the value 1 in the election years and 0 in the other years. PBC literature predicts increased government spending before elections. Therefore, we anticipate that *electionyear* will impact positively spending variable.

Table 1 shows descriptive statistics of variables, together with the expected sign of variables according to the literature.

Table 1. Definition of variables and descriptive statistics

Variable (Expect sign)	Description	Calculation	Min.	Max.	Mean	St. Dev.	
<i>culturalexp</i>	Cultural expenditures per capita (in euros)	Taken from “Estudio Financiero de los Ayuntamientos de la Región de Murcia”	3.55	580.1	91.55	68.25	
<i>Political</i>	<i>electionyear</i> (+)	Dummy election year	Takes value 1 in election years and 0 otherwise	0	1	0.29	0.45
	<i>right</i> (?)	Political ideology of the municipal ruling party	Political ideology of the municipal government: progressive/left=0; conservative/right=1	0	1	0.63	0.48
	<i>majority</i> (?)	Municipal political strength	Value 0: municipal government is made of a coalition of 2 or more political parties. Value 1: only 1 party forms the government	0	1	0.72	0.45
<i>Socioeconomic</i>	<i>income</i> (+)	Municipal tax revenue per capita as a proxy for income per capita (in euros) ²	Taken from “Estudio Financiero de los Ayuntamientos de la Región de Murcia”	50.67	684.04	193.26	101.04
	<i>unemployment</i> (?)	Rate of unemployment of the municipality	Taken from “Anuario Económico La Caixa”	0.8	12.4	3.96	1.81
	<i>education</i> (+)	Share of population with at least second-degree studies	Taken from the Spanish National Statistics Institute	23.45	70.08	43.12	6.55
	<i>youth</i> (?)	Share of population aged under 15	Taken from the Spanish National Statistics Institute	6.95	21.73	17.17	2.39
	<i>elders</i> (+)	Share of population aged over 65	Taken from the Spanish National Statistics Institute	9.77	26.25	15.51	3.37
<i>Geographic</i>	<i>urbanen*</i> (?)	Population density of the municipality	Taken from the Spanish National Statistics Institute	1,127.97	49,649.3	9,497.52	4,363.79
	<i>population</i> (+)	Population of the municipality	Taken from the Spanish National Statistics Institute	559	430,571	27,310.15	60,913.54
<i>Financial</i>	<i>debt</i> (-)	Municipal debt per capita (in euros)	Taken from “Estudio Financiero de los Ayuntamientos de la Región de Murcia”	0	1,126.65	272.95	198.24
	<i>transfer</i> (+)	Regional and central transfers per capita (in euros)	Taken from “Estudio Financiero de los Ayuntamientos de la Región de Murcia”	122.028	1,833.91	339.62	219.53

(* *urbanen* is calculated as population divided by total surface of urbanized km².

² Unfortunately, there is no income data available for the municipalities in Murcia. Following Schulze and Ursprung (2000), we use tax revenue as a proxy for income.

In addition, we investigate whether the intensity of PBC depends on three aspects: mayor's ideology, government political strength and whether the mayor is running for re-election. With this aim, we add interaction the PBC variable (*electionyear*) by *right* (*left*), *majority* (*minority*) and *re-election* (*no re-election*).

First, interactions with mayor's ideology variables *right* and *left* (*1-right*) allow us to test the influence of ideology on the opportunistic behaviour. Second, interactions with variables *majority* and *minority* (*1-majority*) will show whether the intensity of the cycle depends on the political support of the mayor. Third, we have defined a new variable, *re-election*, taking value 1 if the mayor runs for re-election and 0 otherwise. The interaction of variables *re-election* and *no re-election* with *electionyear* allows us to test whether looking for re-election influences the incentives of mayors to take advantage of information asymmetries.

5. Results

Table 2 shows the coefficients of the regressions.

Table 2. Results

Dependent variable	<i>culturalexp</i>			
<i>culturalexp (-1)</i>	0.08 (0.132)	0.09 * (0.066)	0.1 * (0.081)	0.04 (0.468)
<i>electionyear</i>	14.15 *** (0.000)			
<i>right</i>	-18.55 (0.416)	-14.59 (0.560)	-2.44 (0.919)	-18.06 (0.437)
<i>majority</i>	2.59 (0.892)	-7.17 (0.720)	-12.07 (0.573)	11.62 (0.639)
<i>income</i>	0.06 *** (0.000)	0.08 *** (0.000)	0.08 *** (0.001)	0.04 *** (0.001)
<i>unemployment</i>	-5.08 *** (0.000)	-4.36 *** (0.000)	-4.39 *** (0.000)	-8.32 *** (0.000)
<i>education</i>	0.27 *** (0.004)	0.23 * (0.051)	0.29 *** (0.006)	0.32 *** (0.000)
<i>youth</i>	-5.45 *** (0.001)	-5.86 *** (0.004)	-6.49 *** (0.001)	-4.46 ** (0.042)
<i>elders</i>	-16.84 *** (0.000)	-14.73 *** (0.000)	-15.64 *** (0.000)	-16.03 *** (0.000)
<i>urbanen</i>	-0.001 *** (0.000)	-0.001 *** (0.000)	-0.001 *** (0.000)	-0.0009 *** (0.000)
<i>population</i>	-0.00007 (0.443)	-0.0001 (0.272)	-0.0002 ** (0.035)	-0.00007 (0.298)
<i>debt</i>	0.009 (0.289)	0.012 (0.135)	0.004 (0.663)	0.007 (0.404)
<i>transfer</i>	0.11 *** (0.000)	0.11 *** (0.000)	0.11 *** (0.000)	0.10 *** (0.000)
<i>elecright</i>		10.04 *** (0.000)		
<i>elecleft</i>		14.99 *** (0.002)		
<i>elec*majority</i>			16.44 *** (0.000)	
<i>elec*minority</i>			7.59 (0.168)	
<i>elec*reelection</i>				19.07 *** (0.000)
<i>elec*norelection</i>				2.64 (0.679)
m2 (<i>p-value</i>)	1.04 (0.299)	0.99 (0.324)	1.01 (0.315)	0.35 (0.726)
Hansen (<i>p-value</i>)	25.99 (1.000)	25.56 (1.000)	24.11 (1.000)	26.75 (1.000)
Observations	367	367	367	349
Significance: ***1%, **5%,*10%. Z values in brackets				
The tests applied confirm the goodness of our regressions. Arellano and Bond (m2) test confirms that there is no second-order serial autocorrelation. Hansen test for restrictions overidentification shows no autocorrelation between instruments and error term.				

The coefficient of the lagged dependent variable is not significant, which indicates that cultural spending in one year does not depend on cultural spending in the previous year. The coefficient of the electoral variable (*electionyear*) is significant and has the expected

sign, which indicates that mayors increase cultural spending in the election year. This opportunistic behavior of municipal authorities leads to an electoral cycle in culture spending.

The political ideological variable (*right*) shows that the political orientation of government does not affect cultural spending. Therefore, our data do not support the PPM theory. This finding agrees with the results of Brooks (2003), who shows that ideology does not impact public support for government funding of culture in Spain. In a similar study with US data, Brooks (2001) concludes that people who describe themselves as conservatives tend to be less favorable to public funding of culture than people who describe themselves as progressive. According to him, the difference is that cultural policy in Spain is depoliticized, contrary to what happens in the US. In other words, Spanish political parties have separate cultural issues from broader social programs. Moreover, our results are in line with Getzner (2002), Werck *et al.* (2008) and Wert (2006), who show that political orientation does not influence government decisions on cultural spending.

The non-significance of variable *majority* prevents us from confirming RSH. Getzner (2002), Stastna (2009) and Werck *et al.* (2008) also found that government strength has no impact on public cultural spending.

Our results support the hypothesis made by Getzner (2002) that public spending on culture is positively correlated with income. The previous literature has shown that high-income people have a more positive attitude toward culture and its public funding. Thus we can conclude that income causes an increase in demand for public spending on culture. This result is similar to that obtained by Wert (2006), Lewis and Rushton (2007) and Getzner (2002).

Our model also controls the impact of unemployment on public cultural spending. Thus, the coefficient of the variable (*unemployment*) allows us to support the theoretical assumption previously established by Werck *et al.* (2008). He argues that given the positive income elasticity of demand for cultural goods, an increase in the unemployment rate causes a decrease in the demand for cultural activities and, therefore, a reduction of public spending on culture. As above, the positive sign of the *income* variable would be announcing the negative effect of unemployment rate.

The impact of *education* variable on cultural spending is clear: the higher the educational level of citizens, the greater the municipal spending on culture. This is consistent with most previous theoretical and empirical studies which state that individuals with a high level of studies have a more positive attitude toward culture. In addition, this has been used to explain why support for public investment in culture is higher among well-educated people. Some authors have shown that education plays a more important role than income for support of public funding of culture (Brooks, 2001; Brooks, 2004; Rushton, 2005). Consequently, this result can be expected despite the fact that most empirical studies that analyze the relationship between educational level and public spending on culture, have not found significant results (Lewis and Rushton, 2007; Noonan, 2007, Schulze and Rose, 1998; Stastna, 2009).

Our results also show that age structure of population is an important explanatory factor. With regard to the proportion of young people (*youth*), the estimates reveal that it negatively affects spending on culture. This is in line with the idea that people with minor children have less time available to attend cultural events (Rushton, 2005). That is, the level of cultural spending is lower in municipalities where there is a high proportion of youth people as a result of the high opportunity cost of time of their parents. Regarding the *elders* variable, its negative sign may seem surprising since elderly have more free time to attend cultural events, as would be expected that they demand more public spending on culture (Werck *et al.*, 2008; Stastna, 2009). It is possible that the reason why our results are in disagreement with previous studies is the low educational level of the Spanish elderly; only 20% of people over 65 have finished, at least, second-degree studies. Since education is considered one of the major determinants of public spending on culture, it is normal that the level of cultural spending is lower in the municipalities with a higher share of elderly in the population, given their low level of education. Furthermore, the fact that we do not set an upper limit to define the elders variable (proportion of population over 65) implies that we are including people who may be too old to attend cultural events. This aspect was taken into account by Schulze and Ursprung (2000) because their data allowed them to consider only the proportion of population between 65 and 79 years.

The variable measuring the proportion of population living in urban areas (*urbanen*) has a very slight negative effect on cultural spending. The estimates show that the higher the

urbanized population density, the lower the per capita cultural spending. Therefore, our results suggest the presence of economies of scale in cultural services, and also they agree with Werck *et al.* (2008), who show that the population density negatively affect municipal spending on culture. Furthermore, although most previous work has established a positive relationship between the size of the population and cultural spending (Borge, 1995, Schulze and Rose, 1998; Wert, 2006; Werck *et al.*, 2008; Stastna 2009), our data indicate that the size of the municipality (*population*) has no significant effect.

Finally, it was expected that the level of municipal debt would have a negative effect on public spending on culture. However, the estimated coefficient for the *debt* variable is not significant. In contrast, transfers received affect cultural spending. The positive sign of the *transfer* variable indicates that municipalities increase spending on culture with increasing the funds received through transfers. This result agrees with that obtained by Werck *et al.* (2008), who show that transfers lead to increased spending on cultural policies.

Once we have found that PBC focuses on cultural spending, we analyze the effect of political ideology, political strength and re-election willingness on PBC. With this aim, we add as regressors the interaction between PBC variable (*elec*) and variables *right* (*left*), *majority* (*minority*) and *re_election* (*no re_election*). This latter variable takes value 1 if the mayor runs for re-election and 0 otherwise. Table 2 shows the interaction regressions.

Coefficients of variables *elec*right* and *elec*left* are very similar, positive and significant. This means that all mayors follow the same opportunistic behaviour by increasing cultural spending, regardless their political ideology.

Political strength impacts PBC, since only majority governments manipulate cultural spending. We must consider two aspects to explain why minority governments do not show PBC. On the one hand, they have more incentives to manipulate spending, since they have less chances to be re-elected. On the other hand, this manipulation is blocked by the fact that they are obliged to negotiate the PBC policies with other parties. This latter effect turns out to be the most important, preventing minority governments from manipulating cultural spending.

The results show that only mayors who decide to run for re-election adopt an opportunistic behavior, that is, they increase cultural spending in the electoral year. This suggests that the mayor tries to appear competent when he wants to be reelected, but however, when another

colleague from the party runs for election, the mayor in office does not increase spending during the electoral period. Finally, our data refuse the hypothesis of Rosenberg (1992), since the incentives to implement PBC are higher in mayors running for re-election.

6. Conclusions

The purpose of this study is to analyse, for the first time, the effect of electoral timing on local public cultural spending, within the framework of political budget cycle theories. We use a panel sample of all municipalities from the Spanish Region of Murcia for 1995-2008. Our results confirm the existence of the electoral cycles in cultural spending. Mayors behave opportunistically and manipulate this budget instrument on the election year to influence voters. This result is in line with theoretical assumption that election-motivated incumbents prefer policies that can be targeted to voters, adjusted over time, easily manipulated, noted by voters, and attributable to incumbents (Franzese and Jusko, 2006). Local cultural spending fulfils these criteria because cultural policy is one of the few areas where local politicians have total autonomy to decide, its effects are clearly perceived by voters and the fact that they do not receive intergovernmental transfers to implementation of cultural policy causes that this type of expenditure is attributable to local government.

Our results also show that spending on culture does not depend on the ideology of mayor, or on whether the government is fragmented. Getzner (2002) and Werck *et al.* (2008) likewise find that these political variables do not affect cultural spending.

We find that educational level and income have a positive impact on cultural spending. This effect was expected because previous studies have shown that well-educated and high-income people have a more positive attitude toward culture and its public funding.

The paper also analyzes the effect of 3 factors, namely, political ideology, political strength and re-election willingness, on political budget cycle. First, all mayors follow the same opportunistic behaviour by increasing cultural spending, regardless their political ideology. Second, political strength impacts political budget cycle, since only majority governments manipulate cultural spending. Third, mayor's decision to run for reelection also determines the presence of opportunistic cycles. That is, only mayors who seek to be re-elected increase cultural spending right before elections.

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